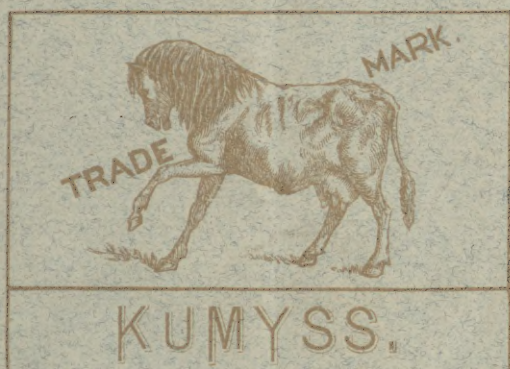
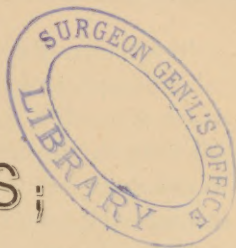


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KUMYSS;

—OR—

RUSSIAN MILK WINE.

KUMYSS has gained such an extensive therapeutical use in Europe, and especially in Russia and Germany, that it deserves to be brought to trial in this country. Many of the eminent practitioners of Europe have furnished us with articles relating to its preparation and wonderful curative properties. It is to these authors we are indebted for the material facts in the following pages:

Preparation:—In Russia, KUMYSS is prepared by the fermentation of mare's milk, but in this country where it is next to impossible to procure mare's milk, cow's milk is used. The difference between mare's milk and cow's milk is simple, the former contains more milk-sugar and less caseine. It can be easily seen that by diminishing the quantity of caseine, and increasing the milk-sugar, cow's milk then possesses almost the same chemical composition as mare's milk. The analogy between vinous fermentation and that of KUMYSS, gives us a right to call KUMYSS a "milk-wine." The following is the analysis of KUMYSS prepared from cow's milk, two days old: Alcohol, 1.23 per cent.; fat, 0.52; sugar, 1.77; lactic acid, 0.63; caseine, 3.08; salt, 0.63; carbonic acid? (whole quantity of solids, 7.67).

This analysis shows that in KUMYSS two days old, not the whole quantity of sugar is changed into alcohol and carbonic acid. The fermentation once begun goes on, even if KUMYSS be put on ice, till all the sugar is changed; this lasts about ten to twelve days. Such KUMYSS, besides containing more alcohol, is also sourer. KUMYSS made in September and kept in an ice cellar till February, showed the following relative quantities of constituents: Alcohol, 3.23 per cent. (which corresponds to about six of milk-sugar;) fat, 1.01; sugar, 0.00; lactic acid, 2.92; caseine and salts, 1.21; carbonic acid, 1.86; whole quantity of solids, 5.14. The albuminous constituent parts are found mostly in a soluble modification.

Physiological Action of Kumyss:—In small doses, *i. e.*, about two or three tumblers, KUMYSS produces only a feeling of warmth in the stomach; strong KUMYSS produces besides this, an effect like champagne, soda-water or seltzer-water, owing to the carbonic acid which it contains. It is borne by the stomach more easily than milk, if two or three bottles of milk or water are drunk daily, they produce a disagreeable feeling of fullness and heaviness in the stomach, which is not the case with KUMYSS, owing to its ready absorption, promoted by the presence of alcohol. Notwithstanding that with KUMYSS a large quantity of nourishing substance is brought into the system, the appetite is not impaired, the patients take their meals regularly and with pleasure. If the tongue was coated in the beginning of the treatment, it cleans in a few days. Absorption of KUMYSS is easy and almost complete, only a small quantity of it being excreted with the fæces; more, although not very much, by the skin and kidneys. KUMYSS is not a diuretic in the true sense of the word, although the salts and the great amount of water that it contains have an influence on

the daily excreted quantity of urine. There are no records of analysis of the urine from patients treated with KUMYSS; it is very likely that there are changes in it depending upon the increased quantity of water and nourishment taken into the system. To this increase of nourishment must be attributed the increase of weight to the patient, beginning to appear the second or third week of the treatment: if this is carried on six or eight weeks, the increase amounts to about twenty pounds. The skin becomes clearer, and its color brighter and healthier. The pulse increases in frequency about ten to fifteen pulsations in a minute; as soon as the patient grows used to KUMYSS the pulse becomes again normal, just in the same way as if an alcoholic drink is taken. The respiration is also more frequent and impeded by the distention of the stomach. The sputa, if present, becomes more profuse, more liquid and frothy; all secretions are more liquid owing to the greater amount of water taken into the system. Some authors assert that KUMYSS has an influence on the genital system; that men grow more excitable, and women menstruate oftener and the discharge is increased in quantity. This may depend upon the diuretic influence of KUMYSS irritating the kidneys, bladder and urethra, from which the irritation is reflected to the genital system, or upon the better nourishment making the genital system more active. Some excitement is produced in the beginning in the nervous system, followed by drowsiness. As to the specific influence of KUMYSS, let us consider its chief constituent parts, first of all the alcohol.

1. In small quantities, it promotes absorption, as has been proven by Claude Bernard.
2. It saves the fatty and also the nitrogenized substances from oxidation.
3. It promotes the secretions and excretions.

4. It excites and heightens nervous action.

The sleep induced by KUMYSS is very likely to be attributed to the alcohol.

5. Alcohol lowers the temperature of the body and increases the power of the heart. Milk-sugar has a beneficial effect upon nutrition. The action of the lactic acid is similar to the organic salts. It lowers the temperature of the body, and decreases the frequency of the pulse, which makes its use desirable where fever is present. Reich ascribes to this acid tonic, antipyretic and diuretic properties. The caseine is present in KUMYSS in a soluble form, and also in an insoluble, but then it is very finely divided. Carbonic acid lowers the rapidity of the heart's action, and acts locally on the stomach as a tonic.

*Therapeutical Use of Kumyss:—*1. KUMYSS is given in diseases of the digestive organs, as catarrhs, chronic diarrhoeas; in all diseases gathered under the head of dyspepsia; in the period of convalescence from typhus and dysentery. It does not increase the difficulty of digestion, and this explains partly its beneficial influence.

2. In disorders of the respiratory organs, and especially in consumption. An idea, very popular now in Europe, is, that production and storing up of fat in the organism is a preservative and even a curative agent in diseases of the lungs, especially in phthisis or protracted specific catarrhal pneumonia with deposits of inspissated catarrhal secretion, or cheesy matter, *i. e.*, yellow tubercle; that is in the so-called scrofulous form. The better nutrition, the formation of fat, prevents the wearing out of the organism, and gives it possibility of outliving, so to say, the slow inflammatory process going on in the lungs, and to attain the period of retrogressive metamorphosis of the cheesy matter, consisting in

softening emulsification, and absorption of the tubercle. The absorption once accomplished, cicatrization might follow. These statements are not merely theoretical; old cicatrices are found in the lungs of patients who died from other diseases; and where there has been for some years a notorious disease of the respiratory organs, which had subsided under treatment. It is evident, in many a case of consumption, death occurs, not from the impossibility of breathing, but from the exhaustion occasioned by the slow consuming fever, which kills here as it kills in protracted suppurations, etc.

This statement implies another, namely, that all hygienic curative agents, like KUMYSS, are invaluable in consumption. Its use in Russia has been brought into practice by the observation how wonderfully soon the constitution of the nomad which had been lowered in the winter, by bad hygienic condition becomes again healthy and brilliant in the summer, and by the idea that those nomads never suffer from consumption. KUMYSS is especially useful in the beginning of phthisis. It cannot do much if the patient is already in a stage of diarrhoeas and colliquative sweats. If KUMYSS is taken steadily in other chronic lung diseases, the nutrition grows also better. Dyspnœa grows better after some time; the expectoration grows easier, which explains the usefulness of the remedy in chronic bronchitis, both in the idiopathic form and in that attending emphysema of the lungs.

3 KUMYSS is very useful in anæmia and chlorosis, in short in all conditions of defective nutrition, as in protracted suppuration, prolonged lactation, in convalescence from fevers, in scurvy, and its allied diseases, in hypochondria, in hysteria, accompanied by anæmia; and as stated above, in diseases of the digestive organs. The properties of KUMYSS are briefly summed up as follows:

1. Promotion of the formation of fat, and promotion of sleep—due to alcohol.
2. Promotion of nutrition in general—due to milk-sugar.
3. Lowering the temperature and pulse—due to lactic acid and alcohol.
4. Renewal of the wasted albuminoid parts — due to caseine.
5. Lowering of the frequency, and increasing of the power of the heart's action—due to carbonic acid.
6. Tonic action of carbonic acid.
7. Diuretic effect of the greater amount of water and salts introduced into the system. We do not find all these qualities combined in any single article of food or medicine except KUMYSS.

Dose.—The dose is the largest quantity that may be taken without injury, two to six or eight bottles a day. The course of treatment is usually begun with two or three tumblerfuls a day, increased gradually to several bottles, and carried on about six to eight weeks; but it is more beneficial when prolonged, because of the comparatively little good done by KUMYSS in the first weeks, some patients, though not liking KUMYSS in the beginning become quite fond of it in time.

If the bowels become constipated during the treatment, add one teaspoonfull of ordinary syrup, to a goblet of KUMYSS occasionally, or as often as a laxative is necessary.

LABORATORY, PATERSON, N. J.

December 11, 1876.

During the past summer I have made a special study of KUMYSS, and have succeeded in making an article identical in all respects to the Russian. Many of the physicians of the Passaic County Medical Society have been using it for the past six months, and have obtained such happy results, that I am guaranteed in giving up all other business, and shall hereafter devote all my time to furnishing physicians with a standard article.

E. F. BRUSH, M.D. *Chemist.*

NEW YORK, March 12th, 1877.

After four months trial by the most eminent medical gentlemen in this city, it is evident that our KUMYSS is gaining the same reputation that the Russian article has in Europe.

We refer by special permission to

Professor FORDYCE BARKER,

Professor ALFRED L. LOOMIS,

Professor A. B. CROSBY,

Professor E. L. KEYS,

and many other gentlemen in the profession, who have been for some time past and are at present using it.

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